

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

What is claimed is:

Claim 1 (original): An artificial tissue system, comprising:

- (a) a matrix configured for biological contact with an implantable device, and
- (b) a plurality of cells supported by said matrix, said cells promoting a biological interaction between said implantable device and a biological system.

Claim 2 (original): The artificial tissue system of claim 1, wherein said cells include at least one member selected from the group consisting of biological cells, engineered cells, support cells, stem cells, artificial cells and hybrid cells.

Claim 3 (currently amended): The artificial tissue system of claim 1 ~~or~~ 2, wherein said cells promote biocompatibility between said implantable device and said biological system.

Claim 4 (currently amended): The artificial tissue system of claim 1 ~~or~~ 2, wherein said cells enhance the lifespan and/or the function of said implantable device.

Claims 5-8 (canceled)

Claim 9 (original): The artificial tissue system of claim 1, wherein said biological system comprises a mammal.

Claims 10-13 (canceled)

Claim 14 (currently amended): The artificial tissue system of claim 1 ~~or~~ 2, wherein said implantable device is a sensor.

Claim 15 (original): The artificial tissue system of claim 14, wherein said sensor is a glucose sensor.

Claim 16 (currently amended): The artificial tissue system of claim 1 ~~or~~ 2, wherein said matrix is configured to at least partially embed said implantable device.

Claims 17-18 (canceled)

Claim 19 (currently amended): The artificial tissue system of claim 1 ~~or~~ 2, wherein said cells are configured to suppress deleterious reactions between said implantable device and said biological system and/or said artificial tissue system.

Claim 20 (currently amended): The artificial tissue system of claim 1 ~~or~~ 2, wherein said matrix comprises at least one member selected from the group consisting of biological matrices, engineered matrices, synthetic matrices, and hybrid matrices.

Claims 21-24 (canceled)

Claim 25 (currently amended): The artificial tissue system of claim 1 ~~or~~ 2, wherein said system further comprises a support system and/or a delivery system comprising a gel, a paste and/or a polymer.

Claim 26 (canceled)

Claim 27 (currently amended): An implant comprising an implantable device in biological contact with the artificial tissue system of claim 1 ~~or~~ 2.

Claim 28 (original): An implant system comprising:

- (a) an implantable device,
- (b) a matrix in biological contact with said implantable device, and
- (c) a plurality of cells supported by said matrix, said cells promoting a biological interaction between said implantable device and a biological system.

Claim 29 (original): A method of implanting a device in a biological system, comprising the steps of:

- (a) obtaining said device,
- (b) obtaining a matrix,
- (c) placing said device in biological contact with said matrix,
- (d) inserting cells into said matrix, said cells being capable of promoting a biological interaction between said implantable device and said biological system, and
- (e) implanting said matrix into said biological system.

Claims 30-31 (canceled)

Claim 32 (currently amended): The method of claim 29 ~~any one of claims 29-31~~, wherein step (c) occurs ~~before~~ after step (d) and before step (e).

Claims 33-34 (canceled)

Claim 35 (original): The prolonged use of an implant formed by the method of claim 29, wherein additional cells are periodically inserted into said matrix during use of said implant.

Claim 36 (currently amended): A system for testing the effectiveness of an implant comprising the artificial tissue system of claim 1 ~~or~~ 2.

Claim 37 (original): An artificial implant system in biological contact with a biological system comprising:

- (a) a cellular component, said cellular component includes at least one cellular community which induces a biological response in the biological system;
- (b) a matrix material, said matrix material being associated with a portion of the cellular community ; and
- (c) an implant device having a biological interface wherein said biological interface is associated with the matrix material and the biological system.

Claim 38 (original): The artificial implant system in biological contact with a biological system of claim 37, wherein the biological response includes neovascularization.

Claim 39 (currently amended): The artificial implant system in biological contact with a biological system of claim 37 ~~or~~ 38, wherein the biological system is a mammal.

Claims 40-49 (canceled)

Claim 50 (currently amended): A system for compatibilizing an implant with an implant-receiving biological system comprising the artificial tissue system of claim 1 ~~or~~ 2.

Claim 51 (currently amended): The artificial tissue system of claim 1 ~~or~~ 2, wherein the matrix comprises a gel.

Claim 52 (original): The implant system of claim 28, wherein the matrix comprises a gel.

Claim 53 (currently amended): The method of claim 29 ~~or~~ 30, wherein the matrix comprises a gel.

Claim 54 (currently amended): The artificial implant system of claim 37 ~~or~~ 38, wherein the matrix material comprises a gel.

Claims 55-56 (canceled)

Claim 57 (original): The method of claim 29, further comprising, before step (e), forming an implantation pocket in the biological system.

Claim 58 (canceled)

Claim 59 (original): The artificial implant system of claim 37, wherein the biological response includes inhibition of fibrosis.

Claim 60 (original): An implant system comprising:

- (a) an implantable device comprising a sensor, and
- (b) a matrix comprising a gel in biological contact with said implantable device, said matrix promoting biocompatibility of said implantable device and a biological system.

Claim 61 (original): A method of improving the biocompatibility of a sensor with a tissue system comprising placing a matrix comprising a gel between the sensor and the tissue system.

Claim 62 (original): A method of implanting a device in a biological system, comprising:

- (a) obtaining an implantable device,
- (b) forming an implantation pocket in the biological system by injecting a biocompatible material, and
- (b) implanting said implantable device in said implantation pocket.

Claims 63-65 (canceled)